

# TATTOOS:



## Grim Reaper with Uzi:

Medical examiners are often the unintended audience for art that depicts the riskier side of life, such as the tattoo on this cadaver.

**T**he ancient practice of tattooing, often seen as harmless—or perhaps simply naughty—is of increasing concern to some public health practitioners. More and more people, especially young people, are engraving their attitudes on their persons. The statements are permanent, while the lifetime embrace of one’s youthful identity frequently is not. Is this a public health issue? Already overburdened local health authorities are being asked to inspect “dermal art” establishments, thus certifying directly or by inference the safety of this inherently risky behavior.

At the editors’ request, a group of high school students in Waterbury, Connecticut, set out to photograph people with tattoos during the summer of 2000. These young people were participants in a summer employment program, part of the Connecticut Collegiate Awareness and Preparation Program (CONNCAP). CONNCAP, which began in 1987, is a state-funded college preparatory program for public school students who are from low-income families or are the first in their families to attend college. In Waterbury, the CONNCAP program is administered by Naugatuck Valley Com-

# A PHOTO ESSAY

## Smoking Skull:

Allergic reactions to the metal salts used in tattooing are not infrequent. This young woman was allergic to the red pigment used in her tattoo, resulting in a weepy, itchy granulomatous reaction.



munity College with supplemental funding from the Greater Waterbury Workforce Investment Board.

As Margaret Christensen points out in her introductory essay, tattoos are obtained for a wide range of reasons. The student photographs and accompanying captions explore some of these motivations. Yet there are more malevolent sides to the practice as well. Dermatologists are often called upon to correct a change of mind, or provide extended treatment for an unintended medical condition resulting from a tattoo. Coroners see a collection of tattoos that must at times seem to foreshadow the inevitable demise of the wearer.

Whether there should be a regulatory response to protect the public's health and whether such a response can influence the practice of tattooing are not matters of hot debate within the public health community. Should they be? The current popularity of tattooing will inevitably pass, but some of its consequences, intended or not, are more indelible.

— *The Editor*

*Text by Margaret H. Christensen, PhD RN*

*Photographs by Naugatuck Valley Community College CONNCAP students*

Tattoos can be seen at every level of US society. Women and men of all backgrounds—from gang members and prisoners to middle-aged professionals and businesspeople—are tattooed.<sup>1</sup> This form of body art is also very popular among adolescents and college students, many of whom tattoo themselves or their friends.<sup>2,3</sup>

People from cultures around the world have marked and adorned their bodies for thousands of years<sup>4</sup>; tattoos are evident in wall paintings and clay figurines from ancient Egypt, Greece, South America, and Mexico.<sup>5</sup> The popularity of tattooing has waxed and waned over time. In 18th century Europe, for example, tattooing was fashionable with royalty and members of the upper classes, but by the 19th century it was considered the mark of carnival performers and sailors.<sup>4,6</sup>

Why get a tattoo? The reasons are almost as varied as the designs. Tattoos express individuality, communicate rebellion against the establishment, define group membership, or convey spiritual meaning.<sup>7-9</sup> As seen in the photographs by young people from Waterbury, Connecticut, tattoos may also mark milestones such as falling in love or losing someone through death.

Although the spread of disease from tattooing is not well documented, the risks to health are evident since there is a small to moderate amount of bleeding with most tattooing procedures. Any break in the skin exposes the body to pathogens. Exposure to an infectious organism could result in either a localized skin infection or a systemic disease. Puncturing the skin with an unsterile tattoo needle or using contaminated pigment could result in a localized skin infection.

Systemic diseases such as HIV or hepatitis may also be spread via tattoo needles. HIV infection as a result of tattooing is difficult to trace due to the time elapsed from exposure to diagnosis and often the presence of other lifestyle factors that put an individual at risk. Investigators around the world are beginning to examine the role of tattooing in hepatitis transmission. Some studies clearly point to tattoos as a significant factor,<sup>10-13</sup> others are diffi-



cult to interpret due to confounding risk factors,<sup>14-16</sup> and some refute any relationship.<sup>17,18</sup> According to the Centers for Disease Control and Prevention (CDC), hepatitis C infection has been associated with tattooing, body piercing, folk medicine practices, and barbering in other countries, while case-control studies in the US have found no association between hepatitis C infection and these types of exposures.<sup>19</sup> Until more controlled studies are completed, the real risk remains unknown.

In its recently published *Hepatitis Surveillance Report*, the CDC describes risk factors for hepatitis C as injection drug use and sexual contact, without mentioning tattoo-

"I was drawn to this woman because of her wings. To me, [this tattoo] says that she's a very free spirit and doesn't let anyone hold her down. It seems as if at any minute now she could spread her wings and fly away."  
*Ranetta Meade*



Woman with tattoo of "an angel protected with doves." *Samantha Moeckel*

SAMANTHA MOECKEL

ing.<sup>20</sup> However, the CDC Hepatitis Branch's home page advises protecting oneself from bloodborne diseases including hepatitis C by avoiding being tattooed with a contaminated instrument and avoiding tattoo artists who do not follow good health practices such as using disposable gloves and good handwashing technique.<sup>21</sup>

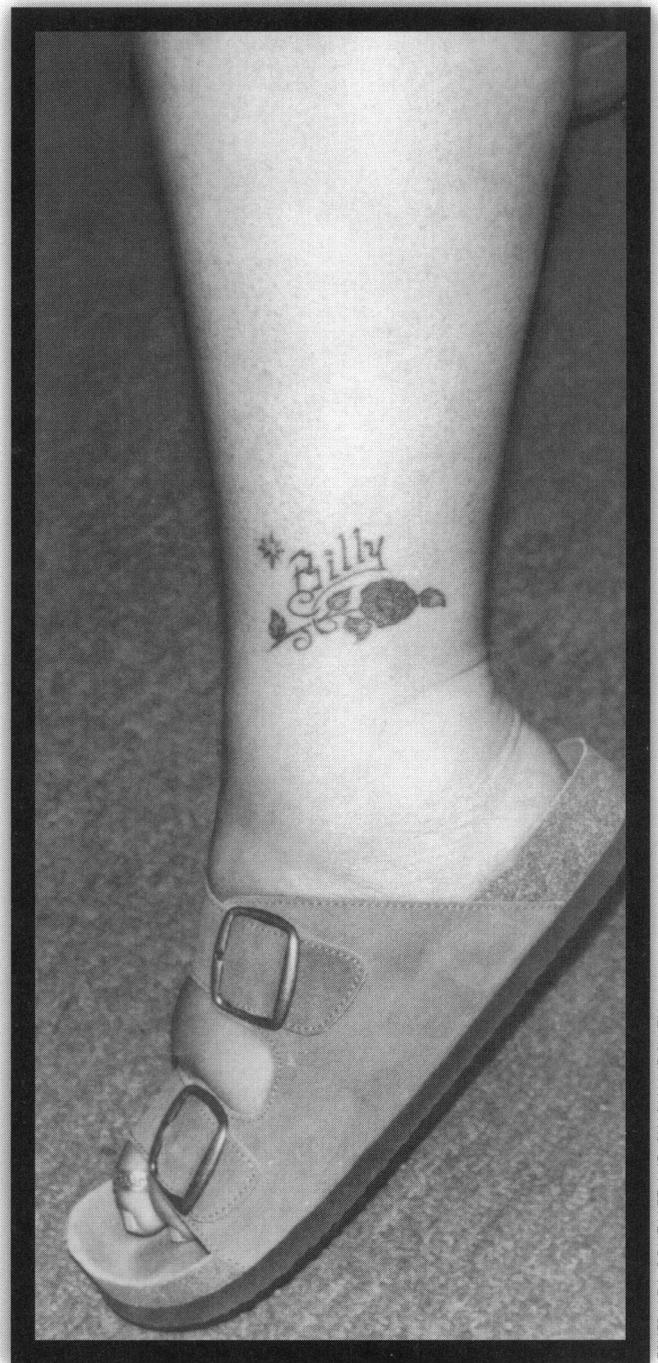
Regulation of the tattooing industry varies from state to state.<sup>22</sup> In New Mexico, North Dakota, and Washington DC, the industry is not regulated. Tattooing of minors is prohibited in 31 states. Standards for certification of training and for types of equipment and handling are regulated by some state legislatures. For example, New York, Ohio, and Tennessee have specific regulations regarding both certification and equipment sterilization. In South Carolina and Florida, tattooing is legal only when performed under the supervision of a physician or dentist, and both states have restrictions regarding minors. The health department inspects and certifies shops in 14 states, while the department of cosmetology is responsible in four states.<sup>22</sup>

Artists learn their trade through apprenticeship with other tattooists. While some are well aware of antimicrobial techniques and use universal precautions, there is no guarantee of safe practices in any shop. The Alliance of Professional Tattooists recommends that clients ask questions about safety precautions such as autoclaving, single needle and pigment use, and work area disinfection.<sup>23</sup> In reality, most individuals getting tattoos do not carefully consider the procedure or the health risks. Tattoos are often obtained on a whim.<sup>1,24</sup>

Systematic research leading to practice guidelines will provide many answers about how to best protect the health of the public. Certification of tattooists and inspection of shops may be key to infection control. In any case, a successful public health approach must build on recognition of the motivations and values underlying the tattoo experience.<sup>25</sup>

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ESMERALDA GONZALEZ AND CHARMAINE SMITH

Woman with tattoo memorializing her deceased brother. *Esmeralda Gonzalez and Charmaine Smith*



“This tattoo is a picture of a boar in police officer uniform. I thought it looked different and intriguing, especially considering it was on a Waterbury police officer’s arm. It was something that made a statement.”

*Charmaine Smith*

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